CLAIMS

1. A method for positioning glyphs at non-integer positions, the method comprising:

receiving glyph data, the glyph data including a glyph, and position data; and

determining a quantized position for the glyph according to a quantization level and the position data.

2. The method of claim 1, further comprising determining a quantization level.

3. The method of claim 2 wherein each position has an associated plurality of components, the method further comprising:

determining the quantization level for each of the plurality of components.

4. The method of claim 3 wherein the quantized position for the glyph is a position in a device space, and determining a quantization level for a component (i) further comprises:

selecting an initial quantization level n;

selecting a point s in the device space such that s[i] = 1/n;

using a font matrix, determining a point s' in an ideal space corresponding to the point s, and a point z in the ideal space corresponding to the origin in the device space;

determining a distance between the point s and the point z; and

responsive to the distance between the point s and the point z not being less than a threshold amount:

selecting a new quantization level such that the distance between the point s and the point z is less than the threshold amount.

5. The method of claim 3 wherein the quantized position for the glyph is a position in a device space, and determining a quantization level for a component (i) further comprises:

selecting an initial quantization level n;

selecting a point s in the device space such that s[i] = 1/n;

using a font matrix, determining a point s′ in an ideal space corresponding to the point s, and a point z in the ideal space corresponding to the origin in the device space;

determining a distance between the point s and the point z; and

responsive to the distance between the point s and the point z being less than a threshold amount:

selecting the initial quantization level to be the quantization level.

6. The method of claim 1, further comprising rendering the quantized glyph.

7. The method of claim 1, wherein determining the quantized position for the glyph further comprises:

determining a quantized position associated with the glyph position data;

selecting as the quantized position for the glyph the determined quantized position.

8. The method of claim 7 wherein determining the quantized position p'[i] associated with the glyph position data further comprises:

determining a value a[i], such that a[i] is a fractional portion of the glyph position data, p[i];

determining a value b[i], such that b[i] is a product of the quantization level and a[i];

determining p'[i] such that p'[i] is a sum of an integer portion of p[i] and a quotient of an integer portion of b[i] divided by the quantization level.

9. The method of claim 8, wherein determining the quantized position associated with the glyph position data further comprises determining a quantized position for each of a plurality of components associated with the glyph position data.

10. A font quantization engine comprising:

a quantization level calculator for determining a quantization level; and

a position quantizer, communicatively coupled to the quantization level calculator, for quantizing glyphs according to their position in an ideal space, the determined quantization level, and a positioning function.

11. A computer program product for positioning glyphs at non-integer positions, the program product stored on a computer readable medium and adapted to perform the operations of:

receiving glyph data, the glyph data including a glyph, and position data; and

determining a quantized position for the glyph according to a quantization level and the position data.

12. A font quantization engine comprising:

receiving means for receiving glyph data, the glyph data including a glyph, and position data; and

determining means, communicatively coupled to the receiving means, for determining a quantized position for the glyph according to a quantization level and the position data.